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Substitute for form 1449/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Application Number</b>		09/416,098	
		<b>Filing Date</b>		1999-10-12	
		<b>First Named Inventor</b>		Teresa H. Meng	
		<b>Art Unit</b>		2611	
		<b>Examiner Name</b>		Eva Y. Puente	
<b>Sheet</b>	<b>1</b>	<b>of</b>	<b>4</b>	<b>Attorney Docket No:</b> 111936 (ATH-0005)	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2/If known</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	001	US5261118	11-09-1993	VANDERSPOOL; li Jan P. et al.	
	002	US5400322	03-21-1995	HUNT; Ronald R. et al.	
	003	US5499236	03-12-1996	GIALLORENZI; Thomas R. et al.	
	004	US5506867	04-09-1996	KOTZIN; Michael D. et al.	
	005	US5691389	11-25-1997	PARRINELLO; Giovanni et al.	
	006	US5742527	04-21-1998	RYBICKI; Mathew A. et al.	
	007	US5802044	09-01-1998	BAUM; Kevin et al.	
	008	US5828660	10-27-1998	BAUM; Kevin et al.	
	009	US5870427	02-09-1999	TIEDEMANN, JR.; Edward G. et al.	
	010	US5914932	06-22-1999	SUZUKI; Mitsuhiro et al.	
	011	US5966644	10-12-1999	SUZUKI; Mitsuhiro	
	012	US6005893	12-21-1999	HYLL; Matthias	
	013	US6044067	03-28-2000	SUZUKI; Mitsuhiro	
	014	US6125103	09-26-2000	BAUML; Robert et al.	
	015	US6160820	12-12-2000	ISAKSSON; Mikael et al.	
	016	US6215778	04-10-2001	LOMP; Gary et al.	
	017	US6628673	09-30-2003	MCFARLAND; William et al.	
	018	US6807146	10-19-2004	MCFARLAND; William	

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/Eva Puente/

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				Examiner Name	Eva Y. Puente
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FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
019	EP0874494		10-28-1998	AT&T CORP.	<input type="checkbox"/>
020	GB2277232A		10-19-1994	MOTOROLA INC [US]	<input type="checkbox"/>
021	WO9949587A1		09-30-1999	KONINKL PHILIPS ELECTRONICS NV [NL], et al.	<input type="checkbox"/>
022	WO9950985A1		10-07-1999	TELIA AB [SE]	<input type="checkbox"/>
023	WO9965155A1		12-16-1999	ERICSSON TELEFON AB L M [SE]	<input type="checkbox"/>

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
024	Alvin M. Despain, "Very Fast Fourier Transform Algorithms Hardware for Implementation", IEEE Transactions on Computers, vol. C-28, No. 5, May 1979, p. 333-341.	<input type="checkbox"/>			
025	BINGHAM, John A.C.: "MULTICARRIER MODULATION FOR DATA TRANSMISSION: AN IDEA WHOSE TIME HAS COME," IEEE COMMUNICATIONS MAGAZINE, PAGES 5-14 (MAY 1990).	<input type="checkbox"/>			
026	Chen Q. et al: Multicarrier CDMA with Adaptive Frequency Hopping for Mobile Radio Systems" IEEE Journal on Selected Areas in Communications, US, IEEE Inc. New York, Vol. 14 no. 9, 1 December 1996, pages 1852-1858.	<input type="checkbox"/>			
027	Chuang, "An OFDM-based system with dynamic packet assignment and interference suppression for advanced cellular internet service" (IEEE Globecom 1998 pp. 974-979).	<input type="checkbox"/>			
028	Clark D. Thompson, "Fourier Transforms in VLSI", IEEE Transactions on Computers, vol. C-32, No. 11, Nov. 1993, pp. 1047-1057.	<input type="checkbox"/>			
029	Gregory Pottie et al., "Channel Coding Strategies for Cellular Radio", IEEE International Symposium on Information Theory, Jan. 17, 1993, San Antonio Texas.	<input type="checkbox"/>			
030	Hakan Olofsson et al., "Interference Diversity Gain in Frequency Hopping GSM", IEEE	<input type="checkbox"/>			

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		Art Unit	2611	
		Examiner Name	Eva Y. Puente	
<b>Sheet</b>	<b>3</b>	<b>of</b>	<b>4</b>	<b>Attorney Docket No:</b> 111936 (ATH-0005)

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T2
		45th Vehicular Technology Conference, Jul. 25, 1995, Chicago, Illinois.	
031		Hamid Alkhani et al., "BDMA Band Division Multiple Access, A New Air-Interface for 3rd Generation Mobile System, UMTS, in Europe", p. 482-488.	<input type="checkbox"/>
032		HERMANN ROHLING et al., "Performance Comparison Of Different Multiple Access Schemes For the Downlink of an OFDM Communication System", Vehicular Technology Conference, 1997, 47th IEEE, Vol. 3, 3-7 May 1997, pp. 1365-1369.	<input type="checkbox"/>
033		Hermann Rohling et al., "Comparison of Multiple Access Schemes for an OFDM Downlink System", Multi-Carrier Spread-Spectrum, 1997, p. 23-30, Kluwer Academic Publishers, Netherlands.	<input type="checkbox"/>
034		International Preliminary Examination Report - PCT/US2000/041164, IPEA/US, 2002-07-25 (111936WO).	<input type="checkbox"/>
035		International Search Report - PCT/US2000/041164, International Searching Authority - European Patent Office, 2001-05-09 (111936WO).	<input type="checkbox"/>
036		Okhawa M. Et Al: Orthogonal MultiCarrier Frequency Hopping-Code Division Multiple Access Scheme for Frequency-Selective Fading" Electronics and Communications in Japan, Part 1 - Communications Scripta Technica. New York, US, vol. 78, no. 8, August 1 1995, pages 86-98.	<input type="checkbox"/>
037		Shinsuke Hara et al., "Transmission Performance Analysis of Multi-Carrier Modulation in Frequency Selective Fast Rayleigh Fading Channel", Wireless Personal Communications 2, 1996, p. 335-356, Kluwer Academic Publishers, Netherlands.	<input type="checkbox"/>
038		VAN DE BEEK et al., 'A Time and Frequency Synchronization Scheme for Multiuser OFDM', November 1999, IEEE Journal on Selected Areas in Communication, Vol. 17, NO. 11, p.1900-1914.	<input type="checkbox"/>
039		Viterbi, "The orthogonal-random waveform dichotomy for digital mobile personal communication" (Proc. 1993 IEEE Int'l Symposium on Information Theory, Jan. 17-22, 1993, pp. 18-23).	<input type="checkbox"/>
040		Wolfgang Eberle et al., "Design Aspects of an OFDM Based Wireless LAN With Regard to ASIC Integration", Published at 2. OFDM-Fachgespräch, Braunschweig, Germany, Sep. 16-17, 1997. 4 pp.	<input type="checkbox"/>

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See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.14). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you need to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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<b>Sheet</b>	<b>4</b>	<b>of</b>	<b>4</b>	<b>Attorney Docket No:</b> 111936 (ATH-0005)

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

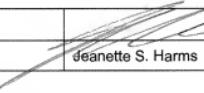
See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature		Date (YYYY-MM-DD)	2011-11-21
Name/Print	Jeanette S. Harms	Registration Number	35,537

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